

HINTS TO THE WORKING CLASSES.

We have received a number of letters from working men, relative to a "note" which appeared a fortnight ago in our pages. They deny that a mechanic with a family can save money out of 30s. a-week, and seemed to conclude that the object of the note in question was to cut down wages. This, however, was not the case. The intention of the writer,—a mechanic like themselves,—was to induce men of his class to spend less than they get. We will let him further speak for himself. Personally, we will only say, that, so far from making any endeavour to lower wages, or countenancing any endeavour to do so, we would most gladly assist in getting for the workmen better times, consistently with justice to others. Whatever the wages may be, however, we must always urge our readers to spend *something less* than their amount, if possible. "Another Working Man," or "A Young Joiner," may live very economically, and yet find it impossible to save anything out of 30s. a-week; still, if he look round, he will find thousands who are compelled to exist with a family on 20s. a-week. It is not that we would see our artisans in such a strait,—far from it—but, being there, we would have them guard against a worse.

The poverty, wretchedness, and want of employment prevailing so largely at the present time, demand the attention of all parties, but more especially of the working man himself.

If working men were placed in their proper position, they ought to be enabled, during the thirty or forty years' toil they have to pass through, to secure to themselves something like an independence for old age.

It is to the interest of the public at large that every man should have a fair day's wages for a fair day's work; for if the honest and industrious are not sufficiently remunerated to support themselves, they must be supported as paupers, vagrants, or convicts; and when the latter are better supported than the former, it is not surprising that the numbers of the latter should be considerably augmented.

But the difficulty arises in giving any definite sum that may be considered as fair between the employer and the employed. That man who receives 15s. per week complains, and justly too, that it is not enough; the man who receives two or three pounds per week finds it too little; but let a man who has been accustomed to receive only 15s. per week be raised to 30s. per week, he deems himself raised to affluence and plenty; reduce the man who has been accustomed to receive 3l. per week to the same standard, he deems himself reduced to starvation; such are the different views of different individuals.

But these remarks are not intended to show what is too much or what is too little, or what is enough; but rather to improve that which we receive, which is the surest way to get more.

We take the average wages of mechanics to be about 1l. 10s. per week; but the fluctuation of trade renders their employment uncertain. No work, no money; consequently, with many, little or no bread. Now supposing a man to calculate upon working ten months during the year, and every month he lays by 1l.,—he saves 10l. for the two months he expects to be unemployed, making an average income of 1l. 5s. per week. But many may object to this rule of saving the sum proposed: I see a greater objection in endeavouring to live without any income when unemployed.

There is another stage of life which should excite our attention, viz., old age. Old age is not so tardy in his approaches as many of us imagine. Our abilities for labour soon become enfeebled. The services of the young and active are preferred to ours, and long before we are prepared or willing we are obliged to give place to them. Now that man's case is truly pitiable who has toiled for thirty or forty years and always lived up to his income, and when he most stands in need of the comforts of life, has little or nothing for his support: it is a hard case to supplicate the tender mercy of others, and to receive for his miserable pittance only about the sixth or seventh part of his former money, and that to be doled out with a grudging hand and a reproachful look.

Forseeing such evils as these, which every

working-man without a capital has reason to expect, can it be unwise to make a provision for this season of life? If we take another 5s. per week it reduces the mechanic's calculated income to 1l. per week; the money so taken makes 10l. per year for old age. Now let us look at the benefits resulting from such conduct. The man who saves 10l. per year out of his wages has very soon a little capital at command, with this advantage, his pound per week is worth or equal to 1l. 5s. of that individual who runs in debt. He can save all this in his purchases by his former savings. By adopting this plan, in the course of thirty years he may calculate on saving sufficient to obtain comforts for his old age. Let young men take the hint; they have a fair starting point.

Further, if this plan were generally adopted it would cause a great increase of trade, which is just what we want. We cannot suppose working men in the possession of a small capital would consent to live in hovels stinking with filth and vermin, and paying after the rate of ten or twelve pounds per year for the same, when they themselves could build respectable cottages, the rent of which would not cost them half that sum. Old ruinous houses would then be forsaken, new ones built, and inhabited by the respectable working classes; we might then calculate on having full employment, which would restore us our other 5s. per week. We hear that poverty and crime are increasing; if so, labour will decrease accordingly. Poverty and crime are like the overflowsings of water; as the torrent increases, the embankment yields to its fury; so by the increase of poverty and crime, a nation is involved in ruin.

Further, if this plan were adopted generally, it would be the surest way to keep up good wages; working men would be in a position to resist any encroachment on their rights, but in a state of poverty, they are compelled by circumstances to accept any and every unreasonable offer that is made to them for their labour. I might continue to enumerate advantages; everything reasonably desirable might be gained,—nothing lost but poverty and disease. It is the shortest way, the smoothest passage, to the gold regions of California.

AN OLD MASON.

PISE AND COB WALLS.

THE substance of cob is loam or clay mixed with straw; it is put on in a moist state by means of shovels, so that a course can hardly be raised higher than 1 foot or 1½ foot at a time, without risk of bulging, and then must be left some time to dry and become consolidated, before a second course can be imposed upon it; and when the whole wall is built up it must be pared down to make the surfaces true and even, whereas the Pisé gravel is rammed in frames, is perfectly dry, and comes forth from the frame a hard, and solid, and dry mass, and the wall may be carried to its full height without any interruption or delay, except what arises from moving the frames: the surfaces are quite even and perpendicular; and nothing remains to be done but to fill up the holes where the bolts passed, which is done by ramming in fine Pisé gravel on both sides at the same time,* with cylindrical pieces of wood of the size of the bolts.

The cob walls being put up wet, no bond timber can be inserted for door-posts, window-frames, or floor-joists; but in the Pisé walls these may be put in, as the work rises, wherever they are wanted. One could pull down a cob wall with the hand; but it requires iron to pick down the Pisé gravel, unless it be previously wetted: vermin can make their way through cob, but no animal can penetrate the Pisé; the one kind of work is tedious, from the necessity of allowing the different courses time to dry, and is often unsatisfactory from the fissures which occur from the inequality of the substance that is used, according as it is worked up more or less stiff; the other suffers no interruption; and if there be any fear of fissure, it can easily be guarded against by laying strips of deal 3 inches wide, and ½ or ¾ inch thick; the one is feeble and perishable in comparison, the

other is said by Pliny to be eternal. The only thing I can compare with Pisé is the old grouting which was formed by filling frames, such as the Pisé frames, with flints or other stones, and then pouring in upon them hot mortar, so liquid that it will make its way into the interstices, and form a compact mass.

Directions for making cob walls 2 feet wide.—The quantity to build a perch of work, that is to say, 18 feet long and 1 foot high, and 2 feet wide,—two loads of clay, and one load of coarse shill* mixed and wetted, and trodden together to lump, just the same as clay for brick before it is put in the mould. Then take three bundles of barley straw, and turn in on straw part of the above mixture, well treading in the three bundles of straw into the above mixture of three loads of clay and shill; then build it on the stone wall, about 6 inches at a time, treading every layer down well and solid. The stone wall under the cob ought to be 2 feet in height from the foundation, to keep the damp off from the cob. The cob wall should project over the stone wall about 1½ inch. If the weather be dry, you may build about 5 feet in height at a time; then it may rest about three weeks, till the wall is got dry to build on again, then bind on 5 feet more on the top, if required.

EFFECT OF OXYGEN ON COLOUR OF GLASS.

At the Society of Arts, on the 15th, Mr. F. Pellat read a paper on the supposed influence of oxygen on the colour or tint of flint glass.

The author, in commencing his paper, stated that the remarks contained in the same are entirely the result of experience in the manufacture of glass in large quantities, it being only under such circumstances that many of the changes there noticed can be observed, because they are so minute, that in dealing with small quantities, their occurrence would not be perceptible. In speaking of white glass the term is comparative, as no glass is perfectly colourless, and to the practised eye of the glass maker there exist no two pieces of the same tint or shade; the word colour, therefore, is used to denote that particular tint or shade, whatever it be, which all white transparent glass possesses. With these remarks the author proceeded to consider the action of oxygen as affecting the colour of flint glass in two distinct particulars. First, its action upon the glass mixture during its melting or fusing whilst in a state of fusion; and secondly, during its cooling or gradual cooling.

The constituents of flint glass are silica, lead, carbonate of potash, and nitrate of potash. The silica is found sufficiently pure as fine sand, which abounds in some districts,—that from Allum Bay, Isle of Wight, is much esteemed. The protoxide of lead—litharge, or the deutoxide—red lead, is the state in which the lead is used, and the potash is the ordinary curl and nitrate of potash of commerce. These, when mixed in certain proportions, and subjected to a strong heat for sixty or seventy hours, produce flint glass. The purer the metal the more transparent the glass, but although all the materials be chemically pure a colourless glass is not the product; owing to some chemical change which takes place during the melting, the glass is tinted with green. This is generally stated to arise from the presence of oxide of iron, but the author believes that in most instances it is owing to the want of a necessary proportion of oxygen in the mixture, which the following experience will go far to prove. The tint of green is always minus when the lead in the glass mixture is in the highest state of oxygenation, that is, when red lead is used, and lowest when litharge is employed in the mixture. When an excess of carbonate of potash is used the green tint is deep, but it may be entirely overcome by the use of the nitrate of potash, and superseded by a purple tint when no metal but lead is present.

Oxygen being the agent by which these changes in the colour of the glass are effected, the glass-maker, in order to overcome the green tint always present when oxygen is

* I doubt whether they have Pisé gravel in Cornwall; what was used at Exeter and Penzance I think was artificial.

* Shill means broken slate, in small pieces, such as is used for mending roads in parts of Cornwall.—Ed. & Rev. St. John.